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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/931,082	08/17/2001	Yasushige Nakamura	011040	2870

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EXAMINER

RODEE, CHRISTOPHER D

ART UNIT	PAPER NUMBER
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1756

DATE MAILED: 07/15/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

AS-10

Office Action Summary

Application No.

09/931,082

Applicant(s)

NAKAMURA ET AL.

Examiner

Christopher D RoDee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 7-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 16 June 2003 has been entered.

Election/Restrictions

Applicant's election of claims 1-6 (Group I) in Paper No. 5 is again acknowledged. The election has been treated as an election without traverse for the reasons given in the prior Office actions (MPEP § 818.03(a)).

Claim Objections

Claim 6 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 6 does not appear to properly further limit claim 1 because the term "electrographic" appears to require the color imaging toner of claim 1 to be able to develop an electrostatic image (see spec. p. 1, l. 7 – p. 2, l. 5; p. 6, l. 8-15). This property is inherently present in the toner of claim 1 because of the presence of the calixarene charge control agent (spec. p. 4, l. 3-8), which imparts a charge to the toner. If claim 6 does provide a

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further limitation to claim 1, applicants are asked to provide an explanation of this further limitation with reference to the specification.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 6 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The new amendment to claim 6 is seen as new matter because the specification as filed does not appear to provide basis for "an electrographic toner." As noted in the Advisory action of 8 May 2003, electrophotographic copying systems are disclosed, but the instant claim is broader because electrographic does not include the "photo" part of electrophotographic. If the terms are synonymous applicants are asked to provide supporting documentation or references to the specification to support this position. Otherwise, the Examiner suggests that this claim be canceled.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kushino *et al.* in US Patent 6,136,488 in view of Yamanaka *et al.* in US Patent 5,049,467.

This rejection was set forth in the prior Office actions. Claim 6 has been amended to specify an electrographic color imaging toner as noted above. This property is seen as present in the combined reference because the prior art toner is designed to develop an electrostatic latent image noting the use of charge control agents in each reference's toners. The limitations of claim 6 are seen as being met by the combined art.

Kushino and Yamanaka are traversed for the reasons given in the response of April 2002. Specifically, applicants state that there must be a basis in the art for modifying the references. Applicants state that the Examiner has mischaracterized the Kushino as calling for a colorless charge control agent, but admits that Kushino does disclose a charge control agent having light color or no color for a color toner other than a black toner. Applicants are also understood to state that the rejection amounts to an obvious to try approach and that there is no expectation of success making the proposed combination. Applicants note that Yamanaka does not state that its charge control agent can be used in a photofixing toner, as required by the instant claims. The benefits of the claimed invention are also not disclosed by the applied art.

The Examiner has carefully considered these remarks but must maintain the position that the references are properly combined to arrive at the claimed invention.

Kushino discloses a flash fixing toner which is fixed by a xenon flash lamp with an energy of $1.6 - 3 \text{ J/cm}^2$ (col. 25, l. 1-2). Kushino also discloses the flash fixing toner as having a binder resin, a colorant, an IR absorbing agent and a colorless charge control agent (Abstract; col. 3, l. 1-22; col. 20, l. 12-20). Applicants are correct that Kushino does not specifically disclose the use of a calixarene charge control agent, but the reference clearly does suggest the use of colorless charge control agents (col. 20, l. 17-20). Yamanaka discloses specific colorless

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calixarenes that serve as charge control agents in toners. These calixarenes are disclosed as having excellent storage stability and stability against environmental changes. The Examiner cannot agree with applicants that he has mischaracterized Kushino. This reference clearly calls for colorless or lightly color charge control agents for non-black toners. Yamanaka discloses its colorless charge control agent as effective in toners having colorants other than black (col. 8, l. 50-59). There is ample motivation to use Yamanaka's calixarene in Kushino's toner based on the desire for a toner charge control agent and the desire for a charge control agent that is colorless for a color toner.

The combination rejection does not adopt an obvious to try approach. There is ample motivation for the combination and, given the high level of skill in the art, the artisan would have been expected to possess the knowledge and experience to prepare Kushino's toner with a different charge control agent. Each reference produces toners by mixing the binder resin, charge control agent, colorant and other components, melting the components, followed by kneading, pulverizing, and classifying (Kushino: Example 1; Yamanaka; Example 1). Given the strong similarities in toner manufacturing there is sufficient reason to believe that the artisan has the ability to prepare a toner according to Kushino with Yamanaka's calixarene charge control agent with only minimal experimentation. Such a level of experimentation is permissible in view of the art's teachings and the routine experimentation expected of the skilled artisan.

Although Yamanaka does not disclose the calixarene compound as being effective in a photofixing toner, this does not negate the obviousness of combining the references. The charge control agent is used in both Kushino and Yamanaka for the disclosed and expected function of providing necessary triboelectric charge to the toner. This property is important when the electrostatic latent image on the surface of an imaging member is developed. The toner fixing step occurs after the image has been developed (see Kushino col. 39, l. 7-18).

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There is little or no effect of the charge control agent during the fixing step because the toner has already been attracted to the imaging member. Thus, the fact that Yamanaka's charge control agent is not disclosed in a photofixing process is not material to the expected functions and properties of the charge control agent and is not material to the photofixing step. There is also no requirement in law that the combination rejection state that it obtain the same benefits as the instant invention or be concerned with the same problems as the inventors. As long as there is structural and/or compositional similarity between the references and the art provides a motivation for combination the rejection is properly made.

The rejection is still seen as proper and is maintained.

Claims 1, 2, 4, and 6 are rejected under 35 U.S.C. 103(a) as being obvious over Takezawa *et al.* in US Patent Publication 2002/0061456 in view of Yamanaka in US Patent 5,049,467.

Claims 1-3 and 6 are rejected under 35 U.S.C. 103(a) as being obvious over Katagiri *et al.* in US Patent Publication 2002/0106571 in view of Yamanaka in US Patent 5,049,467.

Each of the Takezawa and Katagiri references has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and

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that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Katagiri discloses a flash fixing toner containing a binder resin, an infrared absorbing agent, a colorant, a wax, a charge control agent (¶¶ [0026]-[0027]). The infrared absorbing agent may be a phthalocyanine or naphthalocyanine compound (¶ [0039]), which is a preferred infrared absorbing agent according to the instant invention (e.g., see pending claim 2). The coloring agent is contained in an amount of from 0.1 to 20 parts by weight (¶ [0048]). The flash irradiation for fixing has an energy of 0.5 J/cm² to 3.0 J/cm² (¶ [0055]). Example 1 of Katagiri has a calixarene charge control agent (¶¶ [0064]-[0066]) with an aminium infrared absorbing agent and a red colorant. It appears that the infrared absorbing agent inherently has an absorption peak within the range claimed because the compound is within the class of compounds disclosed by the specification as effective in the instant invention (spec. p. 18, l. 31).

Takezawa disclose a flash fixing toner having a binder resin, a coloring agent, a wax, and an infrared absorbing agent held within the wax (Abstract). Useful infrared absorbing agents are aminium salt compounds or diimonium salt compounds (¶¶ [0037]-[0039]; also see spec. p. 18, l. 31). The reference's First Embodiment has 5 wt. % of blue colorant, 3 wt. % of a calixarene charge control agent, and 1.6 wt. % of the infrared absorbing agent (i.e., 40 % of the 4 wt. % infrared absorbing agent-containing wax). It appears that the infrared absorbing agent inherently has an absorption within the range claimed range because the compound is within the class disclosed by the specification as effective in the instant invention (spec. p. 18, l. 31).

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Takezawa specifically teaches that the charge control agent should be achromatic (i.e., colorless) or has only a light color (§ [0045]).

Neither Katagiri nor Takezawa specify the structure of the calixarene compound used in the examples.

Yamanaka discloses a calixarene charge control agent for a toner given by the formula (I) such as compound (1) in column 4. These charge control agents are nearly colorless and are used in amounts of from 0.1 to 10 parts by weight per 100 parts of the binder resin (col. 3, l. 9-11).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the calixarene compound of Yamanaka as the charge control agent in either Katagiri or Takezawa because Katagiri and Takezawa each exemplify the use of a calixarene charge control agent in a flash fixing toner and Yamanaka discloses a specific formula of calixarene that will not alter the color of the color toner. The artisan would recognize an advantage to be gained by the use of Yamanaka's charge control agent because it would not be expected to alter the color of the blue toner in Takezawa or the red colorant in Katagiri.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher D RoDee whose telephone number is 703 308-2465. The examiner can normally be reached on most weekdays from 6 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 703 308-2464. The fax phone numbers for the organization where this application or proceeding is assigned are 703 872-9310 for regular communications and 703 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-0661.

cdr
July 10, 2003


CHRISTOPHER RODEE
PRIMARY EXAMINER